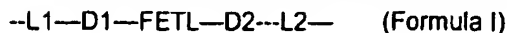


Listing of Claims:

1. (Currently Amended) A fluorescence energy transfer dye comprising having the Formula I:



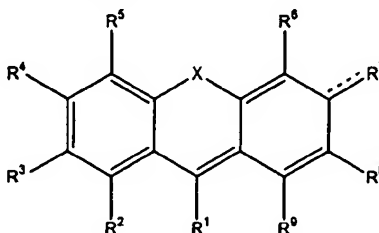
where:

L1 is a link that is a chemical bond for attachment to a probe or target, for attachment to a solid support, or is absent;

L2 is a link that is a chemical bond for attachment to a probe or target, for attachment to a solid support, or is absent;

FETL is a fluorescence energy transfer linker ~~comprising~~ that is a symmetric, rigid or sterically hindered, divalent moiety joined to D1 and D2 via an amine, carbonyl, activated carboxylic acid ester, disulfide, thiol or thiol ester;

D1 is a donor dye represented by the formula:



D1

where:

X is O or C(R*R**), where R* and R** are independently lower alkyl or -CH₂-Z;

R¹ is H, CF₃, perfluoropropyl, lower alkyl acid, substituted-aryl, substituted heteroaryl or Z;

R² is H, halo, SO₃⁻, or is taken together with R³ to form an optionally substituted fused ring having 5 to 7 atoms;

R³ is halo, Z, or is taken together with R² and/or R⁴ to form an optionally substituted fused ring having 5 to 7 atoms;

R⁴ is =O or OH, -N(R^{4'}R^{4''}) or =N⁺(R^{4'}R^{4''}), or is taken together with R³ and/or R⁵ to form an optionally substituted fused ring having 5 to 7 atoms,

where R^{4'} is H, lower alkyl or L1, and

R^{4''} is H, lower alkyl or CH₂-Z;

R⁵ is H, halo, Z, or is taken together with R⁴ to form an optionally substituted fused ring having 5 to 7 atoms;

R⁶ is H, halo, Z, or is taken together with R⁷ to form an optionally substituted fused ring having 5 to 7 atoms;

R^7 is $=O$ or OH , $-N(R^7R^7)$ or $=N^+(R^7R^7)$, or is taken together with R^6 and/or R^8 to form an optionally substituted fused ring having 5 to 7 atoms,

where R^7 is H, lower alkyl or L1, and

R^7 is H, lower alkyl or CH_2-Z ;

R^8 is halo, Z, or is taken together with R^7 and/or R^9 to form an optionally substituted fused ring having 5 to 7 atoms;

R^9 is H, halo, SO_3^- , or is taken together with R^8 to form an optionally substituted fused ring having 5 to 7 atoms; and

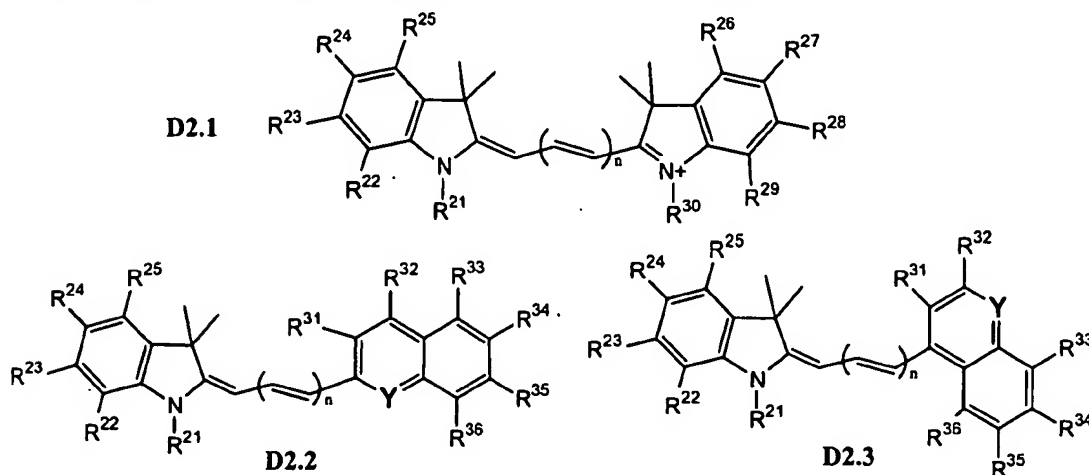
Z is a group of the formula: $-Z^*-Z^1-$ (linkage to L1, L2 or FETL), where:

Z^* is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl;

Z^1 is $-C(O)-$, $-N(Z^2)-$, $-CH_2-O-$, $-CH_2-C(O)-$, $-CH_2-N(Z^2)-$, $-CH_2-S-$, $-CH_2-S(O)-$, $-CH_2-S(O_2)-$ or is absent; and

Z^2 is H, C_1 to C_8 optionally substituted lower alkyl, or optionally substituted aryl; and

D2 is an acceptor/reporter dye represented by formula D1 or by a formula of the group:



where:

at least one of R^{21} to R^{36} is joined to FETL,

n is zero, 1, 2 or 3;

R^{21} and R^{30} are independently $-CH_2-Z$, activated lower alkyl, or optionally substituted aryl/alkyl;

R^{22} to R^{29} are independently H, SO_3^- , or optionally substituted alkyl, or R^{22} and R^{23} , R^{23} and R^{24} , R^{24} and R^{25} , R^{25} and R^{26} , R^{26} and R^{27} , R^{27} and R^{28} , and/or R^{28} and R^{29} taken together form an optionally substituted fused ring having 6 atoms;

R^{31} and R^{32} are independently H, optionally substituted alkyl, aryl, or taken together form an optionally substituted fused ring having 6 atoms;

R^{33} to R^{36} are independently H, SO_3^- , optionally substituted alkyl, aryl, or R^{33} and R^{34} , R^{34} and R^{35} , and/or R^{35} and R^{36} taken together form an optionally substituted fused ring having 6 atoms; and

Y is $-O-$ or $-N(Y^1)-$ where Y^1 is $-CH_2-Z$, activated lower alkyl, or optionally substituted alkylaralkyl;

provided that at least one of R^3 to R^8 is Z where Z* is optionally substituted aryl or optionally substituted heteroaryl; ~~or a probe, target and/or support conjugate thereof.~~

2. (Currently Amended) The fluorescence energy transfer dye of Claim 1 having one or more of the following:

R^1 is H, CF_3 , perfluoropropyl, lower alkyl acid, 5-6 membered mono or 10-12 membered fused substituted aryl or ~~heteroaryl~~heteroaryl, or Z;

R^2 is H, halo, SO_3^- , or is taken together with R^3 to form an optionally substituted fused 6-membered aryl ring;

R^3 is halo, Z, or is taken together with R^2 and/or R^4 to form an optionally substituted fused 6-membered ring;

R^4 is $=O$ or OH, $-N(R^4R^4)$ or $=N^+(R^4R^4)$, or is taken together with R^3 and/or R^5 to form an optionally substituted fused 6-membered ring;

R^5 is H, halo, Z, or is taken together with R^4 to form an optionally substituted fused 6-membered ring;

R^6 is H, halo, Z, or is taken together with R^7 to form an optionally substituted fused 6-membered ring;

R^7 is $=O$ or OH, $-N(R^7R^7)$ or $=N^+(R^7R^7)$, or is taken together with R^6 and/or R^8 to form an optionally substituted fused 6-membered ring;

R^8 is halo, Z, or is taken together with R^7 and/or R^9 to form an optionally substituted fused 6-membered ring;

R^9 is H, halo, SO_3^- , or is taken together with R^8 to form an optionally substituted fused 6-membered aryl ring;

R^4 is $-N(R^4R^4)$ or $=N^+(R^4R^4)$ and R^7 is $-N(R^7R^7)$ or $=N^+(R^7R^7)$ when X is $C(R^*R^{**})$;

Z is a group of the formula: $-Z^*-Z^1-$ (linkage to L1, L2 or FETL), where:

Z^* is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl,

Z^1 is $-C(O)-$, $-N(Z^2)-$, $-CH_2-O-$, $-CH_2-C(O)-$, $-CH_2-N(Z^2)-$, $-CH_2-S-$, $-CH_2-S(O)-$, $-CH_2-S(O_2)-$ or is absent, and

Z^2 is H, or is C_1 to C_8 lower alkyl or aryl optionally substituted with SO_3^- , COOH, NH_2 , CH_2NH_2 , SH, or SCH_3 ;

~~FETL comprises a symmetric, rigid or sterically hindered, divalent moiety joined to D1 and D2 via an amine, carbonyl, activated carboxylic acid ester, disulfide, thiol or thiol ester;~~
R²¹ or R³⁰ is carboxy-naphthyl-methyl, mono- or di-*ortho*-substituted benzyl having an *ortho*-, *meta*- or *para*- carbonyl or activating group, or an activated C₁ to C₆ lower alkyl;
R²² to R²⁹ are independently H, SO₃⁻ or optionally substituted alkyl, or R²² and R²³, R²³ and R²⁴, R²⁴ and R²⁵, R²⁶ and R²⁷, R²⁷ and R²⁸, and/or R²⁸ and R²⁹ taken together form a fused, sulfonated 6-membered aryl ring;
R³¹ and R³² are independently H, optionally substituted alkyl, aryl, or taken together form a fused, sulfonated 6-membered carbocyclic or heterocyclic ring;
R³³ to R³⁶ are independently H, SO₃⁻, optionally substituted alkyl, aryl, or R³³ and R³⁴, R³⁴ and R³⁵, and/or R³⁵ and R³⁶ taken together form a fused, sulfonated 6-membered carbocyclic or heterocyclic ring; and/or
at least one of R²² to R²⁹ or R³³ to R³⁶ is SO₃⁻.

3. (Currently Amended) The fluorescence energy transfer dye of Claim 2 having one or more of the following:

R¹ is H, CF₃, perfluoropropyl, lower alkyl acid, an optionally substituted *ortho*-benzoic acid, or Z;

R² is H, halo or SO₃⁻;

R³ is halo or Z;

R⁴ is =O or OH, -N(R⁴R⁴) or =N⁺(R⁴R⁴);

R⁵ is H, halo or Z;

R⁶ is H, halo or Z;

R⁷ is =O or OH, -N(R⁷R⁷) or =N⁺(R⁷R⁷);

R⁸ is Z;

R⁹ is H, halo or SO₃⁻;

Z is a group of the formula: -Z*-Z¹- (linkage to L1, L2 or FETL), where:

Z* is an optionally substituted aryl or heteroaryl of the group: phenyl, ~~adamantly~~adamantyl, norboranyl, biphenyl, naphthyl, furanyl, bifuranyl, thiophenyl, bithienyl, pyrrolyl, indolyl, isoindolyl, benzofuranyl, isobenzofuranyl, benzothiophenyl, benzothienyl, chromenyl and isochromenyl, and

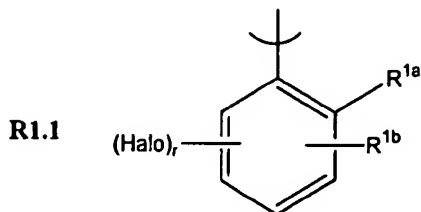
Z¹ is -C(O)-, -N(H)-, -CH₂-O-, -CH₂-C(O)-, -CH₂-N(H)-, or is absent;

R²² to R²⁹ are independently H, SO₃⁻ or optionally substituted alkyl, or R²⁴ and R²⁵ and/or R²⁶ and R²⁷ taken together form a fused, sulfonated 6-membered aryl ring;

R³¹ and R³² are independently H, optionally substituted alkyl or aryl; and/or

R³³ to R³⁶ are independently H, SO₃⁻, optionally substituted alkyl or aryl.

4. (Previously Amended) The fluorescence energy transfer dye of Claim 3 where R¹ is a group represented by Formula R1.1:



where:

R^{1a} is H, halo or -C(O)O⁻;

R^{1b} is H, halo or -C(O)-(linkage to L1, L2 or FETL);

R^{1c} is halo; and

r is 0, 1, 2 or 3.

5. (Currently Amended) The fluorescence energy transfer dye of Claim 1 where at least one of R³ to R⁸ is Z where Z* is optionally substituted aryl selected from phenyl, ~~adamantly~~adamantyl, norboranyl, biphenyl and naphthyl.

6. (Original) The fluorescence energy transfer dye of Claim 5 where Z* is phenyl and Z¹ is -C(O)-.

7. (Currently Amended) The fluorescence energy transfer dye of Claim 1 where:
 R¹ is H, CF₃, perfluoropropyl, lower alkyl acid, an optionally substituted *ortho*-benzoic acid, or Z;

R² is H, halo or SO₃⁻;

R³ is halo or Z;

R⁴ is =O or OH, -N(R^{4'}R^{4''}) or =N^{*}(R^{4'}R^{4''});

R⁵ is H, halo or Z;

R⁶ is H, halo or Z;

R⁷ is =O or OH, -N(R^{7'}R^{7''}) or =N^{*}(R^{7'}R^{7''});

R⁸ is Z;

R⁹ is H, halo or SO₃⁻;

Z is a group of the formula: -Z*-Z¹- (linkage to L1, L2 or FETL), where:

Z* is an optionally substituted aryl or heteroaryl of the group: phenyl,

~~adamantly~~adamantyl, norboranyl, biphenyl, naphthyl, furanyl, bifuranyl,

thiophenyl, bithienyl, pyrrolyl, indolyl, isoindolyl, benzofuranyl,

isobenzofuranyl, benzothiophenyl, benzothieryl, chromenyl and
 isochromenyl, and

Z^1 is $-C(O)-$, $-N(H)-$, $-CH_2-O-$, $-CH_2-C(O)-$, $-CH_2-N(H)-$, or is absent;

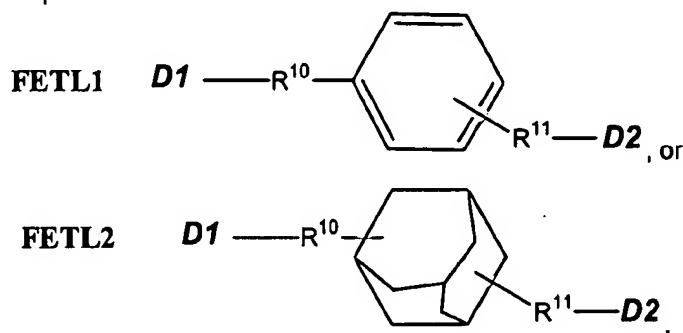
R^{21} or R^{30} is carboxy-naphthyl-methyl, mono- or di-*ortho*-substituted benzyl having an *ortho*-,
meta- or *para*- carbonyl or activating group, or an activated C_1 to C_6 lower alkyl;

R^{22} to R^{29} are independently H, SO_3^- or optionally substituted alkyl, or R^{24} and R^{25} and/or R^{26}
 and R^{27} taken together form a fused, sulfonated 6-membered aryl ring;

R^{31} and R^{32} are independently H, optionally substituted alkyl or aryl; and

R^{33} to R^{36} are independently H, SO_3^- , optionally substituted alkyl or aryl.

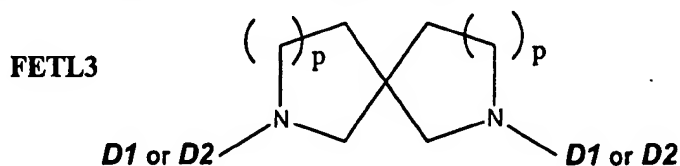
8. (Previously Amended) The fluorescence energy transfer dye of Claim 1 where FETL is
 represented by a formula of the group:



where:

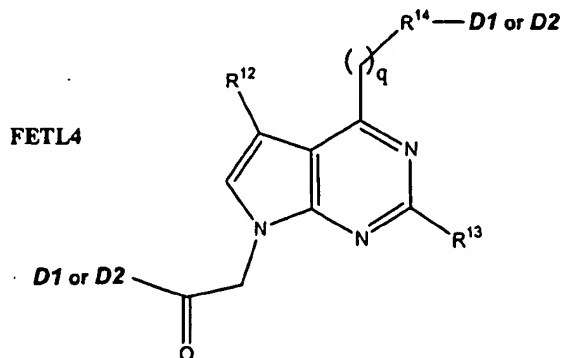
R^{10} is $-C(O)-$, $-N(H)-CH_2-$, $-S-C(O)-$, $-O-C(S)-$ or $-S-CH_2-$; and

R^{11} is $-C(O)-$, $-CH_2-N(H)-$; $-C(O)-S-$, $-C(S)-O-$ or CH_2-S- ;



where:

p is independently 0, 1, 2 or 3; and



where:

q is zero or 1;

R^{12} is H, halo, or optionally substituted-alkyl, -alkenyl, -alkynyl or -aryl;

R^{13} is H, SO_3^- or optionally substituted-alkyl, -alkenyl, -alkynyl or -aryl; and

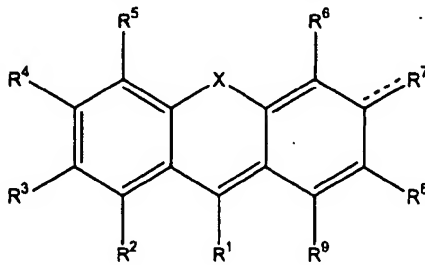
R^{14} is a secondary or tertiary amine or heterocyclyl, particularly N(H) or piperazine.

9. (Currently Amended) The fluorescence energy transfer dye of Claim 8 where FETL is FETL1 and:

R^{10} is $-C(O)-$ or $-N(H)-CH_2-$; and

R^{11} is $-C(O)-$ or $-CH_2-N(H)-$.

10. (Currently Amended) A compound represented by the formula:



D1

where:

X is O or $C(R^*R^{**})$, where R^* and R^{**} are independently lower alkyl or $-CH_2-Z$;

R^1 is H, CF_3 , perfluoropropyl, lower alkyl acid, substituted aryl, substituted heteroaryl or Z;

R^2 is H, halo, SO_3^- , or is taken together with R^3 to form an optionally substituted fused ring having 5 to 7 atoms;

R^3 is halo, Z, or is taken together with R^2 and/or R^4 to form an optionally substituted fused ring having 5 to 7 atoms;

R^4 is $=O$ or OH , $-N(R^{4'}R^{4'})$ or $=N^+(R^{4'}R^{4'})$, or is taken together with R^3 and/or R^5 to form an optionally substituted fused ring having 5 to 7 atoms,

where $R^{4'}$ is H, lower alkyl or L1, and

$R^{4'}$ is H, lower alkyl or CH_2-Z ;

R^5 is H, halo, Z, or is taken together with R^4 to form an optionally substituted fused ring having 5 to 7 atoms;

R^6 is H, halo, Z, or is taken together with R^7 to form an optionally substituted fused ring having 5 to 7 atoms;

R^7 is $=O$ or OH , $-N(R^7R^7)$ or $=N^+(R^7R^7)$, or is taken together with R^6 and/or R^8 to form an optionally substituted fused ring having 5 to 7 atoms,

where R^7 is H, lower alkyl or L1, and

R^7 is H, lower alkyl or $\text{CH}_2\text{-Z}$;

R^8 is halo, Z, or is taken together with R^7 and/or R^9 to form an optionally substituted fused ring having 5 to 7 atoms;

R^9 is H, halo, SO_3^- , or is taken together with R^8 to form an optionally substituted fused ring having 5 to 7 atoms; and

Z is a group of the formula: $-\text{Z}^*-Z^1-$ (linkage to L1, L2 or FETL), where:

Z^* is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl;

Z^1 is $-\text{C}(\text{O})-$, $-\text{N}(\text{Z}^2)-$, $-\text{CH}_2\text{-O}-$, $-\text{CH}_2\text{-C}(\text{O})-$, $-\text{CH}_2\text{-N}(\text{Z}^2)-$, $-\text{CH}_2\text{-S}-$, $-\text{CH}_2\text{-S}(\text{O})-$, $-\text{CH}_2\text{-S}(\text{O}_2)-$ or is absent; and

Z^2 is H, C_1 to C_8 optionally substituted lower alkyl, or optionally substituted aryl;

L1 being a link that is a chemical bond for attachment to a probe or target, for attachment to a solid support, or is absent;

L2 being a link that is a chemical bond for attachment to a probe or target, for attachment to a solid support, or is absent; and

FETL being a fluorescence energy transfer linker ~~comprising~~ that is a symmetric, rigid or sterically hindered, divalent moiety joined to D1 and D2 via an amine, carbonyl, activated carboxylic acid ester, disulfide, thiol or thiol ester;

provided that at least one of R^3 to R^8 is Z, where Z^* is optionally substituted aryl or optionally substituted heteroaryl, ~~or a FETL, probe, target and/or support conjugate thereof.~~

11. (Currently Amended) The compound of Claim 10 having one or more of the following:

R^1 is H, CF_3 , perfluoropropyl, lower alkyl acid, 5-6 membered mono or 10-12 membered fused substituted aryl or ~~heteroaryl~~ heteroaryl, or Z;

R^2 is H, halo, SO_3^- , or is taken together with R^3 to form an optionally substituted fused 6-membered aryl ring;

R^3 is halo, Z, or is taken together with R^2 and/or R^4 to form an optionally substituted fused 6-membered ring;

R^4 is $=\text{O}$ or OH , $-\text{N}(\text{R}^4\text{R}^4)$ or $=\text{N}^+(\text{R}^4\text{R}^4)$, or is taken together with R^3 and/or R^5 to form an optionally substituted fused 6-membered ring;

R^5 is H, halo, Z, or is taken together with R^4 to form an optionally substituted fused 6-membered ring;

R^6 is H, halo, Z, or is taken together with R^7 to form an optionally substituted fused 6-membered ring;

R^7 is $=O$ or OH , $-N(R^7R^7)$ or $=N^+(R^7R^7)$, or is taken together with R^6 and/or R^8 to form an optionally substituted fused 6-membered ring;

R^8 is halo, Z , or is taken together with R^7 and/or R^9 to form an optionally substituted fused 6-membered ring;

R^9 is H , halo, SO_3^- , or is taken together with R^8 to form an optionally substituted fused 6-membered aryl ring;

R^4 is $-N(R^4R^4)$ or $=N^+(R^4R^4)$ and R^7 is $-N(R^7R^7)$ or $=N^+(R^7R^7)$ when X is $C(R^*R^{**})$; and/or Z is a group of the formula: $-Z^*-Z^1-$ (linkage to **L1**, **L2** or **FETL**), where:

Z^* is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl,

Z^1 is $-C(O)-$, $-N(Z^2)-$, $-CH_2-O-$, $-CH_2-C(O)-$, $-CH_2-N(Z^2)-$, $-CH_2-S-$, $-CH_2-S(O)-$, $-CH_2-S(O_2)-$ or is absent, and

Z^2 is H , or is C_1 to C_8 lower alkyl or aryl optionally substituted with SO_3^- , $COOH$, NH_2 , CH_2NH_2 , SH , or SCH_3 .

12. (Currently Amended) A fluorescence energy transfer dye conjugate represented by Formula II:

Probe--L1--(D1 or D2)--FETL--(low affinity false target) (Formula II)

where:

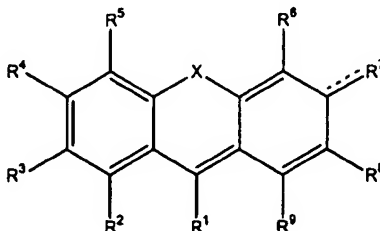
Probe is a polynucleotide, antibody, triglyceride, low density lipoprotein or lectin;

L1 is a link that is a chemical bond for attachment to the Probe;

FETL is a fluorescence energy transfer linker comprising that is a symmetric, rigid or sterically hindered, divalent moiety joined to D1 and D2 via an amine, carbonyl, activated carboxylic acid ester, disulfide, thiol or thiol ester;

low affinity false target is an analyte for the Probe disposed on FETL to deactivate, block or otherwise prevent coupling of FETL to a corresponding D2 or D1 until said low affinity false target is displaced by a higher affinity true target;

D1 is a donor dye represented by the formula:



D1

where:

X is O or C(R^{*}R^{**}), where R^{*} and R^{**} are independently lower alkyl or -CH₂-Z;

R¹ is H, CF₃, perfluoropropyl, lower alkyl acid, substituted aryl, substituted heteroaryl or Z;

R² is H, halo, SO₃⁻, or is taken together with R³ to form an optionally substituted fused ring having 5 to 7 atoms;

R³ is halo, Z, or is taken together with R² and/or R⁴ to form an optionally substituted fused ring having 5 to 7 atoms;

R⁴ is =O or OH, -N(R^{4'}R^{4''}) or =N⁺(R^{4'}R^{4''}), or is taken together with R³ and/or R⁵ to form an optionally substituted fused ring having 5 to 7 atoms,

where R^{4'} is H, lower alkyl or L1, and

R^{4''} is H, lower alkyl or CH₂-Z;

R⁵ is H, halo, Z, or is taken together with R⁴ to form an optionally substituted fused ring having 5 to 7 atoms;

R⁶ is H, halo, Z, or is taken together with R⁷ to form an optionally substituted fused ring having 5 to 7 atoms;

R⁷ is =O or OH, -N(R^{7'}R^{7''}) or =N⁺(R^{7'}R^{7''}), or is taken together with R⁶ and/or R⁸ to form an optionally substituted fused ring having 5 to 7 atoms,

where R^{7'} is H, lower alkyl or L1, and

R^{7''} is H, lower alkyl or CH₂-Z;

R⁸ is halo, Z, or is taken together with R⁷ and/or R⁹ to form an optionally substituted fused ring having 5 to 7 atoms;

R⁹ is H, halo, SO₃⁻, or is taken together with R⁸ to form an optionally substituted fused ring having 5 to 7 atoms; and

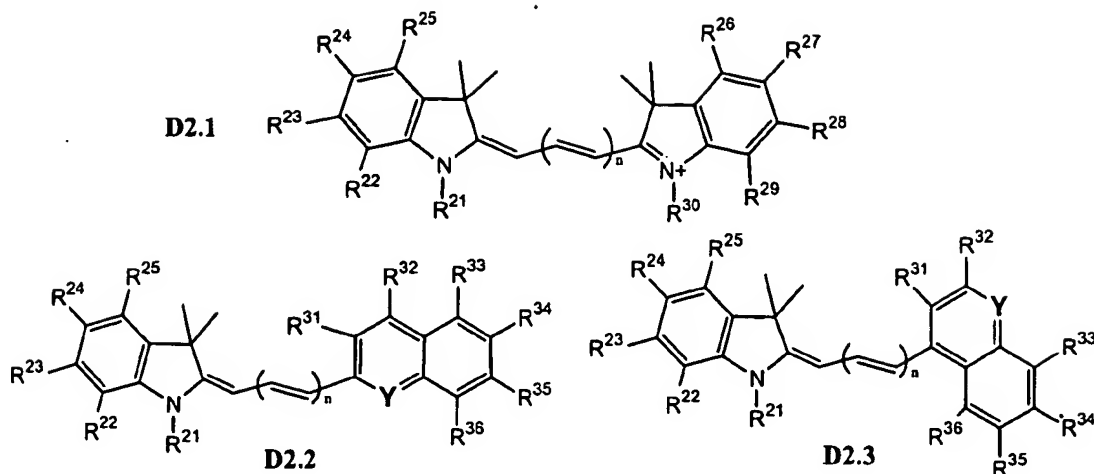
Z is a group of the formula: -Z^{*}-Z¹- (linkage to L1, L2 or FETL), where:

Z^{*} is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl;

Z¹ is -C(O)-, -N(Z²)-, -CH₂-O-, -CH₂-C(O)-, -CH₂-N(Z²)-, -CH₂-S-, -CH₂-S(O)-, -CH₂-S(O₂)- or is absent; and

Z² is H, C₁ to C₈ optionally substituted lower alkyl, or optionally substituted aryl; and

D2 is an acceptor/reporter dye represented by formula D1 or by a formula of the group:



where:

at least one of R^{21} to R^{38} is joined to FETL,

n is zero, 1, 2 or 3;

R^{21} and R^{30} are independently $-\text{CH}_2\text{-Z}$, activated lower alkyl, or optionally substituted arylalkyl;

R^{22} to R^{29} are independently H, SO_3^- , or optionally substituted alkyl, or R^{22} and R^{23} , R^{23} and R^{24} , R^{24} and R^{25} , R^{26} and R^{27} , R^{27} and R^{28} , and/or R^{28} and R^{29} taken together form an optionally substituted fused ring having 6 atoms; and

R^{31} and R^{32} are independently H, optionally substituted alkyl, aryl, or taken together form an optionally substituted fused ring having 6 atoms;

R^{33} to R^{36} are independently H, SO_3^- , optionally substituted alkyl, aryl, or R^{33} and R^{34} , R^{34} and R^{35} , and/or R^{35} and R^{36} taken together form an optionally substituted fused ring having 6 atoms; and

Y is $-\text{O}-$ or $-\text{N}(\text{Y}^1)-$ where Y^1 is $-\text{CH}_2\text{-Z}$, activated lower alkyl, or optionally substituted aralkyl.

13. (Currently Amended) A fluorescence energy transfer assay for determining the presence of a target site in a substance requiring no pre-analysis purification for removal of unbound dye, comprising the steps of:

- (a) contacting a substance to be tested and a target site specific Probe-L1-(D1 or D2)-FETL-(low affinity false target) conjugate of Claim 12 in a suitable assay vessel under conditions suitable for preferential binding of the Probe to the target site, as opposed to the low affinity false target;
- (b) introducing into the vessel a second D2 or D1 fluorescence energy transfer dye having an activated site for coupling to the FETL into the vessel, under conditions suitable for

coupling to FETL where the low affinity false target is not bound to the Probe,
wherein the second dye is the other of the D1 or D2 found in the conjugate;

(c) causing D1 to absorb energy; and

(d) measuring the level of D2 emission, wherein emission from D2 upon absorption of energy
by D1 indicates the presence of the target site in the substance.

14-16. (Cancelled)

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17. (Currently Amended) A proximity assay comprising the steps of :

(a) contacting a substance to be tested and a target-site-specific donor dye in a suitable
assay vessel;

(b) introducing a target-site-specific fluorescence energy transfer reporter dye conjugate of
Claim 4-19 into the vessel, where said reporter dye's target is either spatially
proximate to said donor dye target or specific for a given target to be tested for
spatial proximity to said donor dye target, and said reporter dye's energy absorption
spectra overlaps the emission spectra of said donor dye;

(c) causing the donor dye to absorb energy; and

(d) measuring the level of reporter dye emission, wherein emission from the reporter dye
upon absorption of energy by the donor dye indicates the proximity of the donor dye
target and the reporter dye target in the substance.

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18. (Currently Amended) The proximity assay of Claim 17 wherein:

step (b) further comprises introducing two or more target-site-specific fluorescence energy
transfer reporter dye conjugates of Claim 4-19 into the vessel, said reporter dyes
having energy absorption spectra overlapping the emission spectra of said donor
dye, distinct emission spectra, and having different targets to be tested for spatial
proximity to said donor dye target; and

step (d) further comprises measuring the level of reporter dye emission at the wavelengths
characteristic of said reporter dyes, wherein emission characteristic of each reporter
dye upon absorption of energy by the donor dye indicates the respective proximity of
the donor dye target to each corresponding reporter dye target in the substance.

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19. (New) A conjugate comprising the dye of claim 1 conjugated to a probe, a target, and/or a
support.

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20. (New) A conjugate comprising the compound of claim 10 conjugated to a probe, an FETL, a
target, and/or a support.

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Claims 1-13, 17-18 are pending in this application.

Claims 14-16 are cancelled.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13, 17-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The structures represented by L1, L2 and "FETL" must be shown in every occurrence in the claims. Applicant cannot claim all or any known L1, L2 and FETL compounds that may be applicable in the instant invention because the specification fails to state that all or any known L1, L2 and FETL compounds is/are applicable in the invention. Therefore, the specification fails to provide adequate support for the claims. Additionally, FETL is a critical element of the invention and therefore must be disclosed in the claims. See the MPEP. This is not possible to ascertain the structures and/or identities of L1 and L2. If L1 and L2 are chemical bonds it must be so stated in the specification and the claims. By adding claim 8 to claim 1 define L1 and L2 as bonds the rejection would be overcome.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

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Claims 1-13, 17-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For reasons set forth above under 35 USC 112, first paragraph, claims 1-13, 17-18 are indefinite.

The term "comprising" in claim 1, line 6 and claim 10, line 37 renders claims 1-7 10-13, 17-18 indefinite. The term is an open-ended term, which cannot be used in reference to a compound. By replacing the term with "is" the rejection would be overcome.

The term "into" in claim 13, line 9, is idiomatic and therefore, the claim is indefinite. By replacing the term with "in" the rejection would be overcome.

Applicant's arguments filed 8/16/05 have been fully considered but they are not persuasive. Applicant contends that FETL is not a critical element of the broadest claim, applicant is not limited to the preferred embodiments and that FETL1-4 are examples. This is not persuasive because a critical element of an invention is an element without which the invention would not work as designed. In the instant invention without FETL the invention would not work as claimed. While applicant is not limited to the preferred examples, the metes and bounds of each claim is a statutory requirement. Applicant should also note that "Exemplification is not an explicit definition." The specification must set forth the definition explicitly and clearly, with reasonable clarity, deliberateness and precision, *Teleflex Inc. v. Ficosa North Am Corp.*, 63 USPQ2d 1374, (Fed. Cir. 2002), *Rexnord Corp. v. Laitram Corp.*, 60 USPQ2d 1854 (Fed. Cir. 2001).

Figure Drawing

The Datasheet in this application indicates four drawing sheets were filed. However, none is in the case as at this time. Applicant must file new copies.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taofiq A. Solola, PhD., JD., whose telephone number is (571) 272-0709.

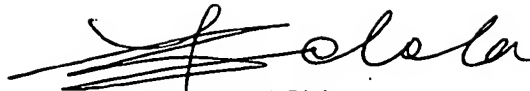
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Joseph McKane, can be reached on (571) 272-0699. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

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A handwritten signature in black ink, appearing to read 'Taofiq Solola', with a stylized flourish at the end.

TAOFIQ SOLOLA
PRIMARY EXAMINER

Group 1626

September 29, 2005